

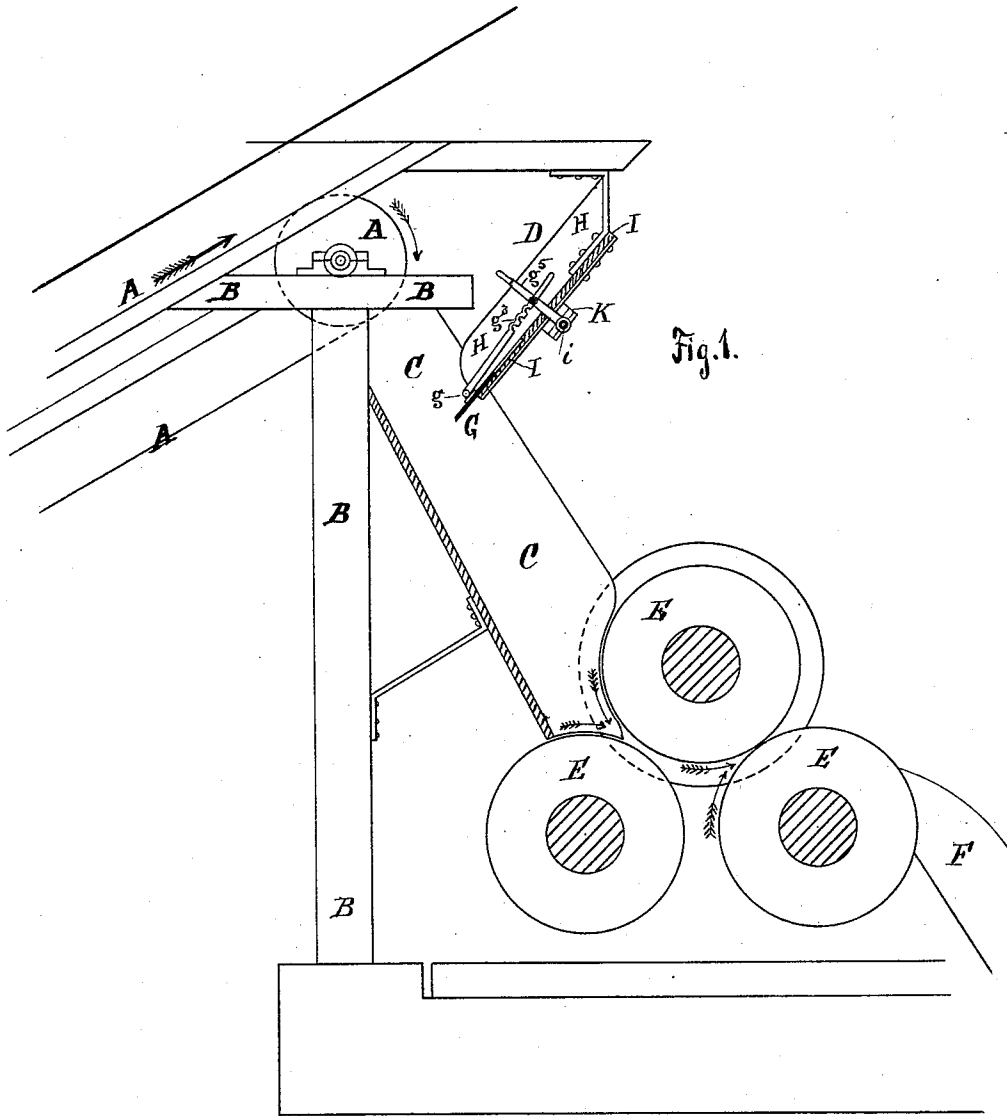
(No Model.)

2 Sheets—Sheet 1.

J. FISHER.
FEED CHUTE FOR SUGAR MILLS.

No. 482,085.

Patented Sept. 6, 1892.



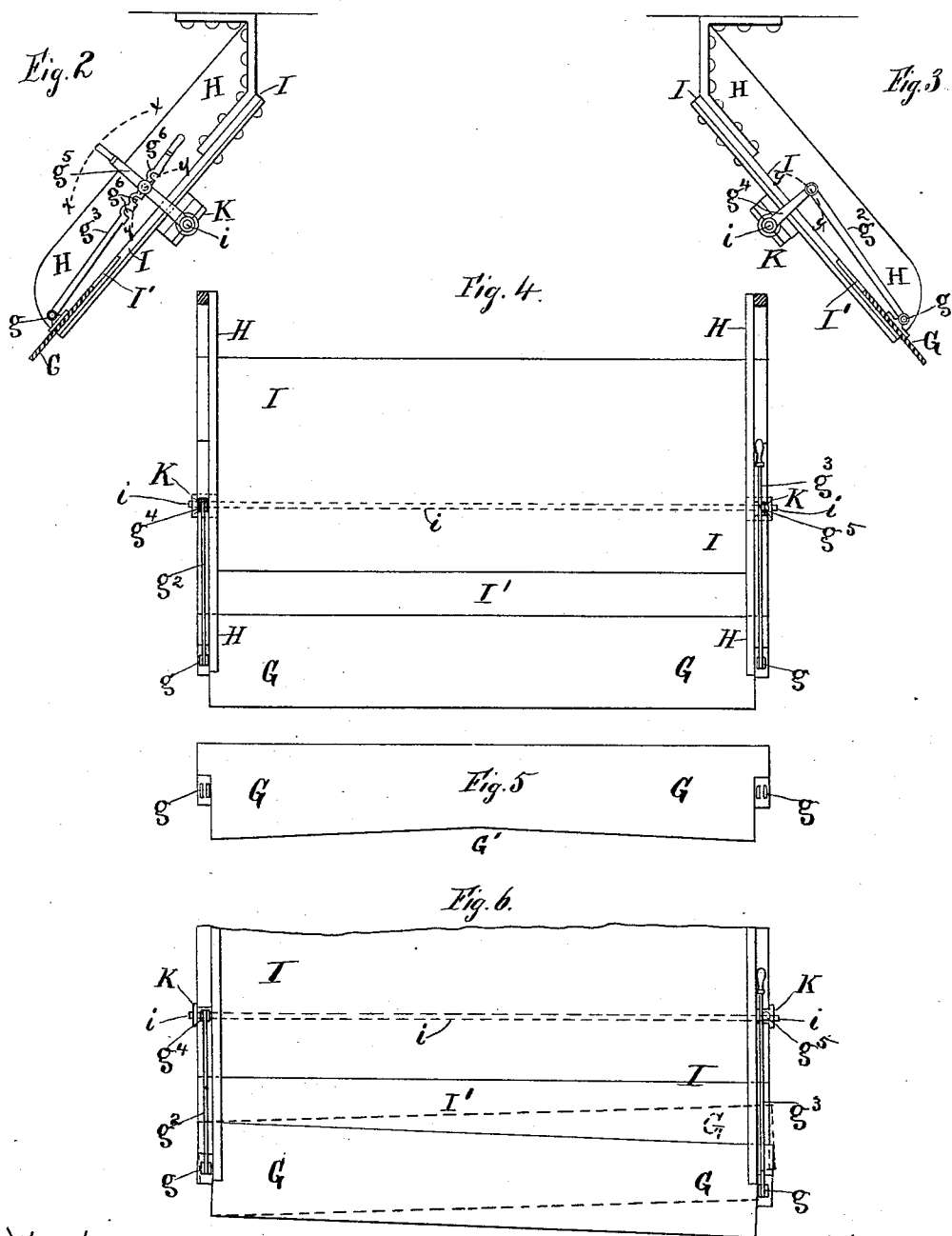
WITNESSES:
A. M. Pierce.
Isabel Chester.

INVENTOR:
John Fisher
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UNITED STATES PATENT OFFICE.

JOHN FISHER, OF HAVANA, CUBA.

FEED-CHUTE FOR SUGAR-MILLS.

SPECIFICATION forming part of Letters Patent No. 482,085, dated September 6, 1892.

Application filed December 8, 1891. Serial No. 414,373. (No model.)

To all whom it may concern:

Be it known that I, JOHN FISHER, of Havana, Cuba, have invented certain new and useful Improvements in Feed-Chutes for Sugar-Mills, of which the following is a specification, reference being had to the accompanying drawings.

My improvements relate especially to the construction of a chute for the feeding of prepared, broken, shredded, or fibrous sugar-cane to the mills in an unbroken sheet suitable to the capacity and adjustment of the rolls themselves and of their feeding apparatus.

Such improvements consist in the construction, arrangement, and combination of the several parts or portions comprising the feed-chutes, as hereinafter described, whereby a controlled greater or less quantity of feed is supplied along the whole face of the rolls or at different portions of the same.

In the drawings, Figure 1 represents a general sectional elevation of a sugar-mill, conveyers, main chute, and counter-chute, the latter containing and embodying my improvements. Figs. 2 and 3 represent end elevations of the counter-chute. Fig. 4 represents a plan view of the counter-chute with an adjustable extension piece, plate, or blade held in a fixed parallel position. Fig. 5 represents a plan view of the extension piece or plate removed from the chute. Fig. 6 shows the extension piece, plate, or blade set and held in a position angular with the parallel extension of Fig. 4—that is, having one end projecting farther out than the other. Either end of the extension-piece may project the farther, or its edge may be hollowed out or made concave, as shown in Fig. 5. The object of such general adjustability is the controlling of the quantity fed to different portions of the roller-face. For instance, with the extension-blade in positions, as shown by full or dotted lines in Fig. 6, a greater depth of feed would be allowed to pass to the rolls at one end than at the other, or if by wear the rolls become hollow the face of the extension-blade is made concave or hollow, as at G', thus permitting a thicker supply at the center than at either

end, or at both ends. The hollow blade may be provided with similar end extension and adjustment as the straight blade, thus giving greater scope of adjustment.

Similar letters of reference designate like parts or portions in all the figures.

Referring particularly to Fig. 1, A designates the usual conveyer or carrier for delivering the cane to the mills, and B a supporting-framework for the same.

C designates the main chute leading down to the connecting-mill.

D designates a counter-chute embodying my improvements and operating in connection with the main chute.

E designates the rolls of the mill, any style of which may be used.

F designates a chute for receiving the discharge from the mills.

In the several figures, G designates the extension-blade of the counter-chute; H, a pair of side inclosing uprights erected on the counter-chute. They have slots I' at the bottom outer portions of each, within which the ends of the extension-blade are guided in their in and out movements.

I designates the bottom of counter-chute, which is preferably cut away at I' to form a pocket or seat for the extension-blade, whereby the top surfaces of both are made flush with each other.

g g designate a pair of swivel connections attached to the end of the extension-blade.

g² and g³ are connecting-pitmen operated by swinging levers g⁴ and g⁵.

At that side of counter-chute most convenient to the operator the connecting-pitmen and the swinging levers are extended to form handles, as shown in Fig. 2, the connecting-pitman as extended being provided with several gabs or hook-slots g⁶ for lengthening the distance between the swivel connections of the extension-blade and the swinging lever g⁵. At the opposite side or the one out of ordinary reach the connecting-pitman and swinging lever are generally made of a fixed length, as shown at g² and g⁴ at Fig. 3.

Bearings K K are located at each side of

the counter-chute, and an operating-shaft i extends between the swinging levers g^4 and g^5 , the said levers being keyed or made fast to the same shaft for simultaneous operation.

- 5 When it is desired to adjust the position of the extension-blade and the depth or thickness of the material fed to the rolls, the connecting-pitman g^3 is raised and the blade G moved in or out, as may be desired, until any
10 one of the gabs g^6 , as necessary, hooks onto the connecting-pin of swinging lever g^5 . The whole extension-blade may then be moved forward or backward as a whole in its adjusted position by moving the swinging lever g^5
15 and its opposite connected associate g^4 to and fro on circular lines $x x y y$ of Figs. 2 and 3. Such varying end extension may be applied to a blade having a hollow or concave edge. These features of adjustment and control of
20 the material while being fed to the rolls are necessary to overcome any tendency or leaning of the material to the sides or to any portion of the face of the rolls, or to provide a proper supply when the rolls are worn or
25 when not originally true with each other. An equal strain should come upon the whole face of the rolls while at work, hence a possible unequal thickness of material to produce such equal strain. By such means, also, the regularity of feed will provide for the greatest possible extraction from the compression of the
30 cane, and in consequence of such regularity

and steadiness of strain the possibilities of a break-down of the machinery and mill will be greatly lessened.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the main chute for supplying material to the rolls of a sugar-mill, a counter-chute provided with an extension-blade for controlling the size and shape of the opening or space between the two chutes, and means for moving said extension-blade or a portion thereof in and out to project more or less from the counter-chute, substantially as
40 and for the purposes set forth.

2. In combination with the main chute for supplying materials to the rolls of a sugar-mill, a counter-chute provided with an extension-blade for controlling the size and shape of the opening or space between the two chutes, a pair of swivel connections attached to the ends of the extension-blades, a pair of swinging levers connected by a shaft extending the width of the chute, and a pair of connecting-pitmen, either one of which is provided with a series of gabs or hook-slots, whereby the said pitman is lengthened or shortened, substantially as and for the purposes set forth.

JOHN FISHER.

Witnesses:

ALFONSO PESANT,
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